CLAIMS

What is claimed is:

1. A tooth extraction device, comprising:

a handle;

a clamp assembly attached to said handle, said clamp assembly comprising a structure for clamping a tooth to be extracted; and

a cable attached to the clamp assembly for moving the clamp assembly relative to the handle to extract a tooth.

2. The tooth extraction device according to claim 1, wherein said structure for clamping a tooth comprises a pair of clamp links that engage opposite sides of the tooth.

3. The tooth extraction device according to claim 1, wherein said clamp assembly is attached to the handle such that moments applied to the handle are transferred to the tooth to be extracted.

4. The tooth extraction device according to claim 1, further comprising a manually operated trigger connected to the cable, said trigger being operable to move the cable relative to the handle.

5. The tooth extraction device according to claim 4, further comprising a pinion connected to the trigger for rotation with the trigger, and a rack connected to the cable, the rack and pinion being intermeshed such that rotation of the trigger

causes movement of the cable and the clamp assembly relative to the handle.

6. The tooth extraction device according to claim 1, wherein said clamp assembly comprises a pair of clamp links pivotally connected to a carrier block, said clamp links being rotatable to engage opposite sides of a tooth, and said carrier block being movable relative to the handle to extract the tooth.

7. The tooth extraction device according to claim 6, wherein the carrier block is slidable relative to the handle.

8. The tooth extraction device according to claim 7, wherein said clamp links and said carrier block are arranged such that movement of the cable in a first direction first causes said clamp links to rotate into engagement with opposite sides of a tooth and then subsequently causes said carrier block to slide along the handle to extract the tooth.

9. The tooth extraction device according to claim 8, wherein said clamp assembly comprises a wedge attached to a free end of the cable, said wedge increasing in thickness in a direction away from the cable, and said clamp links each having a surface that engages a respective opposing side of said wedge, whereby movement of said wedge relative to said clamp links causes said clamp links to rotate on said carrier block.

10. The tooth extraction device according to claim 8, wherein said clamp assembly comprises a pair of toggle links connected to a free end of the cable, said toggle links each being connected to a respective one of said clamp links, whereby movement of said toggle links relative to said carrier block causes said clamp links to rotate on said carrier block.

11. The tooth extraction device according to claim 1, wherein said handle has a handgrip portion at a first end, the clamp assembly attached to a second end, and an elongated neck portion extending between the first and second ends, and wherein the cable extends through the neck portion to an actuator located within the handle.

12. The tooth extraction device according to claim 1, further comprising at least one support for engaging a neighboring tooth to provide a reaction force when extracting a tooth.

13. The tooth extraction device according to claim 12, wherein said at least one support comprises a base support for engaging a first neighboring tooth on a proximal side of the clamp assembly, and a removable tooth support for engaging a second neighboring tooth on a distal side of the clamp assembly.

14. A tooth extraction device, comprising:

a handle;

a clamp means attached to said handle for clamping a tooth to be extracted; and

a drive means for sequentially pivoting said clamp means into engagement with the tooth to be extracted and then sliding said clamp means relative to said handle to extract the tooth.

15. The tooth extraction device according to claim 14, wherein said drive means comprises a cable connected to said clamp means.

16. The tooth extraction device according to claim 15, wherein said drive means further comprises a manually operated trigger connected to the cable, said trigger being operable to move the cable relative to the handle.

17. The tooth extraction device according to claim 16, wherein said drive means further comprises a pinion connected to the trigger for rotation with the trigger, and a rack connected to the cable, the rack and pinion being intermeshed such that rotation of the trigger causes movement of the cable and the clamp assembly relative to the handle.

18. A tooth extraction device, comprising:

a handle;

a clamp assembly attached to said handle, said clamp assembly comprising a pair of clamp links pivotally connected to a carrier block, said clamp links being rotatable to engage opposite sides of a tooth, and said carrier block being slidably movable relative to the handle to extract the tooth;

a cable attached to the clamp assembly for moving the clamp assembly relative to the handle to extract a tooth;

an actuator for moving the cable within the handle; and

a support for engaging a neighboring tooth to provide a reaction force when extracting a tooth.

19. The tooth extraction device according to claim 18, further comprising a manually operated trigger connected to the cable, said trigger being operable to move the cable relative to the handle.

20. The tooth extraction device according to claim 19, further comprising a pinion connected to the trigger for rotation with the trigger, and a rack connected to the cable, the rack and pinion being intermeshed such that rotation of the trigger causes movement of the cable and the clamp assembly relative to the handle.

21. The tooth extraction device according to claim 18, wherein said clamp assembly and said carrier block are arranged such that movement of the cable in a first direction first causes said clamp links to rotate into engagement with opposite sides of a tooth and then subsequently causes said carrier block to slide along the handle to extract the tooth.